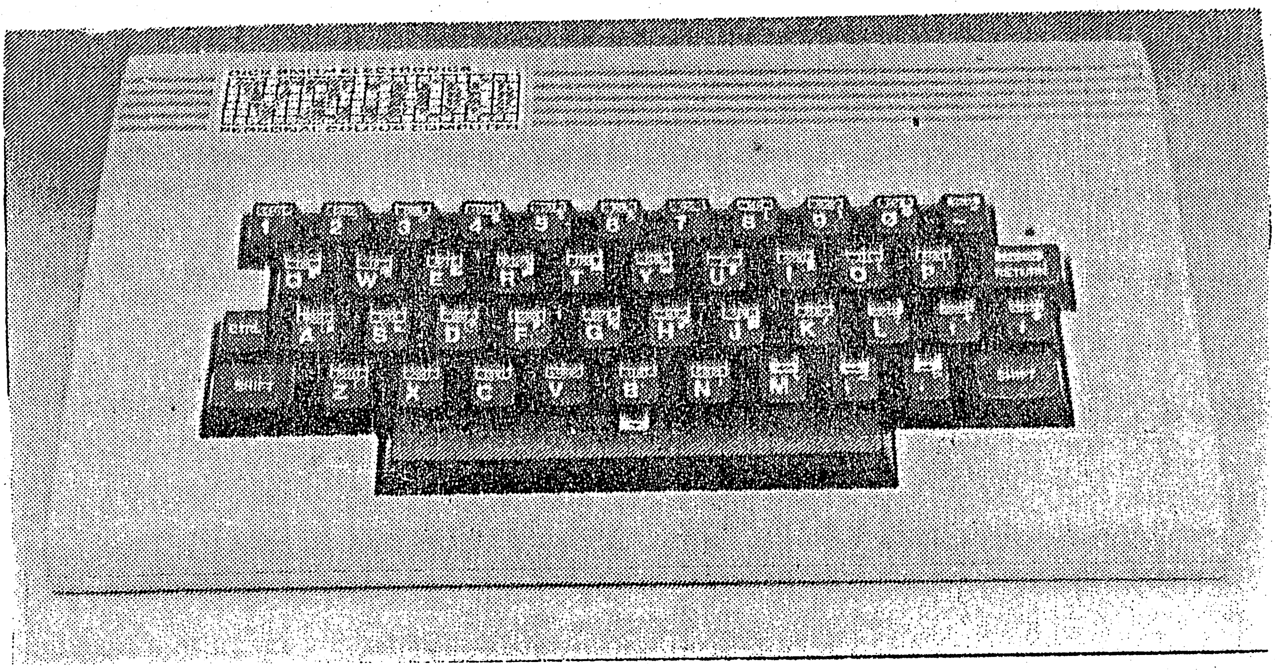
ISSUE NUMBER 1.

HUNTER VALLEY VZ USERS' GROUP NEWSLETTER.



JUNE 1986.

EDITORIAL - - -

Welcome to the very first edition of the Hunter Valley VZ Users Group Newsletter. Needless to say things have been a little bit hetic, what with trying to establish the actual Group, work out some very basic ground rules and edit a Newsletter too.

In this and following newsletters, almost the entire content will be provided by Members or simply interested readers. As much as is practicable, we will screen all submissions for error, and if there is even a slight element of doubt, we will endeavour to make you, the reader, aware of such. But at the same time it must be stated that neither the HVVZUG, or the editor, will accept any responsibility whatsoever.

~~Any article contained within this and future issues may be copied.~~

Well with that over and done with, I guess it time to make some acknowledgements; Firstly sincere thanks to Mr. David Boyce, of Adelaide, and to Mr. Robert Quinn, from Wagga Wagga. Both gentlemen have gone to extraordinary lengths to contribute to a newsletter so far away from them. Many thanks Robert and David. Back on the local scene, thanks to our resident Technical Officer, Joe Leon. It was only through Joe that David and Robert were able to communicate. Also thanks to Joe and David for their efforts with our technical report, in this issue. To the chaps who did our Program Reviews, Adam and Matthew, thank you and keep up the good work. Of course, many thanks to the other Group Officers who submitted their reports, Peter (Pres) and Ross (Sec).

Deadlines for the next issue is Monday the 30th. of June. Our next meeting is the Grand Opening of the HVVZUG. All welcome, of course, (see details inside).

HUNTER VALLEY V Z USERS GROUP.

PRESIDENT ....Peter Ellis

VICE PRESIDENT ....Phil Hazell

SECRETARY ....Ross Woods

TREASURER ....Mark O'Brien

CHAIRMAN / EDITOR ....Gavin Williamson

Mail all submissions to:-
THE SECRETARY, HVVZUG.,
ROSS WOODS,
83 LAMBTON PARADE,
SWANSEA HEADS. 2281

***Unless a stamped, self addressed envelope is enclosed, all articles will remain the property of the HVVZUG. Feel free to send information on disk or tape.

PRESIDENTS REPORT.

Hello Vz'ers.

Welcome to our first newsletter. This is volume one of what we hope will be many such informative tomes. With your co-operation and submissions we hope to make this newsletter a success.

After a few problems the Hunter Valley VZ Users' Group is up and running. The word so far seems to be the same all over; like there are a lot of frustrated VZ users' out there who are a little annoyed with the recent displays of support (or rather lack of) given to us VZ'ers by D.S.E. For example, there have been no program books, user information or technical data since the release of the 300. Not what one would call terrific show of post-product support. Of course we aren't really doomsday prophets, for on the plus side, we have seen some excellent software released lately. Come on tricky, Vz'ers are only asking that you don't become too complacent. There's 85,000 of us out here and we can't all be wrong. The Hunter Valley VZ Users' Group have one ambition, we hope to fill this gap or at least give you someone to share your problems with. In this newsletter we will endeavour to bring you original programs, circuit diagrams and modifications so you can get the best out of your VZ.

Finally I would just like to take a couple of lines to make note of a united feeling from within the Group. That is an expression of thanks our Club Patron, Father Ray Nelson, for without his help in providing St.Marks Church Hall we would not be anywhere near advanced as we are. Also thanks, Father Ray, for the guidance (more political than spiritual) in regard to the seemingly tireless answering of many questions in our pioneering stages.

Ok fellow Members, thats my lot. Please read the the Constitution as there are a few basic ground rules contained in this that will help everyone along the way to happier computing and will hopefully create a better "Club" atmosphere.

Happy veezeding.
Peter Ellis
(Pres).

VZ 200-300 INPUTS, OUTPUTS AND MODIFICATIONS.

The drawings on the next page show the INPUTS and OUTPUTS of the VZ as well as how to make a new DATASSETTE LEAD, install RESET and SHIFT LOCK SWITCHES. None are too dificult to implement and with a little care even the novice should be able to do the mods. Remember, any mods done on on a VZ will void your warranty.

VZ 200/300 INPUTS/OUTPUTS.

The original drawing appeared in April issue of VE ZEE NEWS and I thank David Boyce for his permission to reprint it. I added a few more details to the drawing. Anyone contemplating MODS to their VZ will find the information most usefull as some published printouts in other magazines were incorrect. All the INPUT/OUTPUT PORTS are self explanatory and need no further comment.

TAPE PLAY/RECORD LEAD.

I'm into my 4th. lead now. The supplied leads just dont stand up to well. Also I believe the VZ 300 leads are way to short. The circuit should help anyone making or repairing their lead.

RESET.

The RESET circuit using SW3 (switch 3) and/or SW4 connects to the MEMORY EXPANSION PORT pins 1 and 2. The 220 ohm resistor is there to prevent possible damage to internal circuitry. Besides the 220 ohm resistor only SW3 is needed for reset. For Persons who accidently keep bumping the reset button then SW4 can be added in series with SW3, then both switches have to be pressed at the same time to affect reset. Connect only A or B to pin 2. Use N.O. (normally open) push button switches for SW3 and SW4.

POWER OFF RESET.

Members with DISK DRIVES should not use previous RESET as it does not totally reset the VZ. After using previous RESET with a M.L. (machine language) program I could not access the DISK DRIVE till I used the ON/OFF switch. The POWER OFF RESET switch uses a N.C. (normally closed) push button switch and interupts the power supply to the VZ. It is the preferable of the two and is easier to install.

SHIFT LOCK SWITCH.

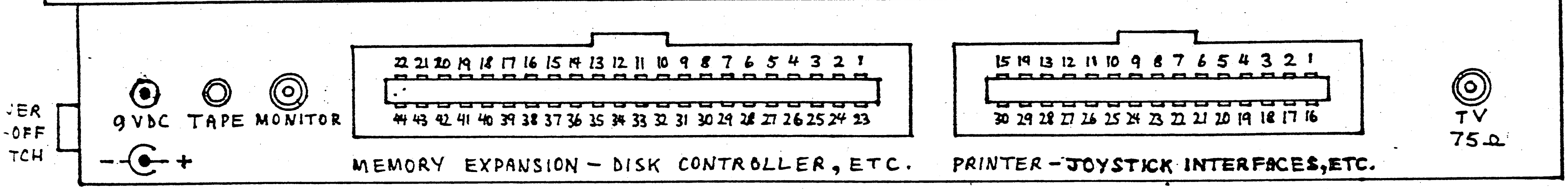
This is a little more difficult to implement as the PCB (printed circuit board) has to be removed from the case and a couple wires soldered to the bottom of the PCB directly under where the KEYBOARD cable is. The RED LED is the POWER ON LED and is shown for clarity. SW5 Should be a DPDT (double pole double throw) switch. You can use a slide, push button or toggle switch depending on Your preference. Only half of SW5 is needed to implement a SHIFT LOCK. A warning LED can be connected to the unused half of SW5 giving visual indication that SHIFT LOCK is operational. The 330R resistor is there to limit the current to the LED. If a FLASHING LED is desired then the resistor is omited as it works directly off 5 VOLTS. 5 VOLTS should be available either side of the KEYBOARD CABLE on the top side of the PCB. VZ 300 owners should check for themselves as I'M not familiar with it. Do not connect the SHIFT LOCK wires to A 2 and D 2 on the MEM. EXP. or PRINTER PORTS as they are not part of the keyboard matrix. I did not give any construction details as the mods are pretty simple to effect. The Switches and LED can be mounted anywhere it's convenient providing there is sufficient room and does'nt foul any internal pillars.

Happy Hacking

JOE LEON

(Technical Advisor).

VZ200/300 INPUT/OUTPUT CONNECTIONS — REAR VIEW — NOT TO SCALE — ORIGINAL BY D. BOYCE



-VDC - 2·1mm POWER SOCKET
-APE - 3·5mm STEREO SOCKET
-ONITOR - RCA SOCKET

MEMORY EXPANSION - DISK CONTROLLER, ETC.

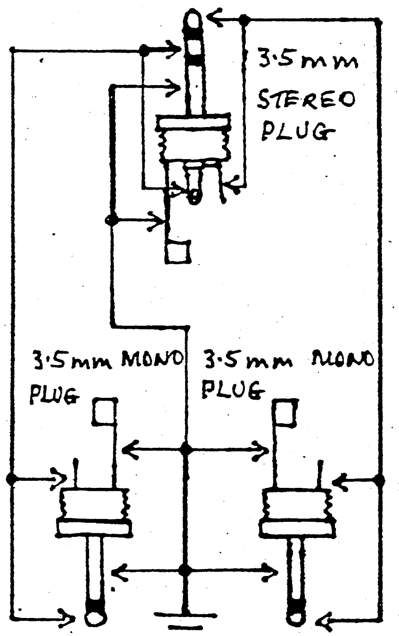
NO. FUNCTION	NO. FUNCTION	NO. FUNCTION
1 - GND	16 - $\overline{MI}$	31 - D 3
2 - $\overline{RESET}$	17 - $\overline{WAIT}$	32 - D 5
3 - A 10	18 - $\overline{NMI}$	33 - D 6
4 - A 9	19 - $\overline{RD}$	34 - N.C.
5 - A 8	20 - $\overline{IORQ}$	35 - A 0
6 - A 7	21 - +5VDC	36 - D 0
7 - A 6	22 - GND	37 - D 1
8 - A 5	23 - GND	38 - $\overline{INT}$
9 - A 4	24 - A 11	39 - $\overline{HALT}$
10 - A 3	25 - A 12	40 - $\overline{MERQ}$
11 - A 2	26 - A 13	41 - $\overline{WR}$
12 - A 1	27 - A 14	42 - N.C.
13 - D 2	28 - A 15	43 - +9VDC
14 - D 7	29 - CLK	44 - N.C.
15 - $\overline{RFSH}$	30 - D 4	

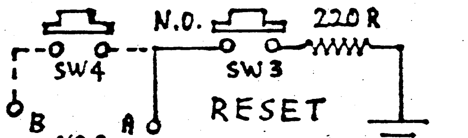
PRINTER - JOYSTICK INTERFACES, ETC.

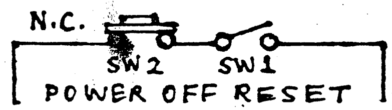
NO. FUNCTION	NO. FUNCTION
1 - N.C.	16 - N.C.
2 - N.C.	17 - N.C.
3 - N.C.	18 - N.C.
4 - +5VDC	19 - +5VDC
5 - $\overline{IORQ}$	20 - N.C.
6 - D 3	21 - D 4
7 - D 6	22 - D 5
8 - D 2	23 - D 7
9 - D 0	24 - D 1
10 - A 5	25 - $\overline{RD}$
11 - A 2	26 - A 1
12 - A 6	27 - A 4
13 - A 3	28 - A 0
14 - $\overline{WR}$	29 - A 7
15 - GND	30 - GND

N.C. = NOT CONNECTED

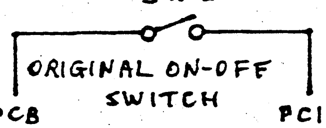
TAPE PLAY/RECORD LEAD



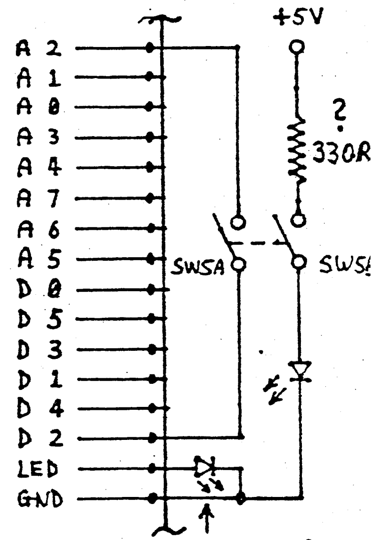




SW1 IS POWER ON-OFF SWITCH



TV - RCA SOCKET



BOTTOM VIEW OF PCB WHERE KEYBOARD CABLE CONNECTS

SHIFT LOCK SWITCH WITH OPTIONAL SHIFT LOCK ON INDICATOR LED

BY JOE LEON

JUNE 1986

GAMES REVIEW DEPT.

Well as we promised, the first Newsletters first GAMES WORKSHOP is on DAWN PATROL. Considered by many as one of the best games available and for the price of $13.95, it's exceptional value all round. The program is based on the arcade game CHOPLIFTER. To play you take charge of your helicopter and fly off to enemy P.O.W. camps to rescue prisoners, while all the time you have to avoid shooting tanks, missile launching planes and surface to air missiles. In the VZ version, there are four P.O.W. camps and a tank gaurding either side of each camp. The only way you can land your 'chopper is to shoot these tanks. This is done by pressing the "N" key to turn your 'chopper through 90 degrees, thus making your gun (space bar) fire straight down. Once you land the prisoners will automatically come running out of the hut and board the helicopter. Be wary though, because the tanks will come back after a while and you will again be under fire. At the furtherest two camps, (camps one and two) there are the surface to air missile launchers at each side of the camps. These will home in on your 'chopper, sometimes at great speed and if you're not quick, your 'chopper will be destroyed. On top of this there are also 'planes which come, fire heat seeking missiles and leave again. These missiles are deadly accurate and you often get sandwiched between two of them. You cannot shoot the aeroplanes, but you can shoot the missile it carries.

*** SCORING ***

Tanks 100
Surface to Air Missiles ..200
Air to Air Missiles 600
PRISONERS:
Camp 1 ...(futherest)....1500
Camp 2 500
Camp 3 200
Camp 4 ...(nearest).......100

Points for missiles and tanks are awarded instantly, whereas to collect the points for picking the prisoners, you must return to your base and land your helicopter. Refueling is also instananeous, upon tuchdown at base. You are given four helicopters at the start, and the game is over when all 'choppers have been destroyed, or you retrieve all the prisoners. Only six unexploded helicopter bullets are allowed on the screen at the one time.

*** CONTROL KEYS ***
Q ... UP
A ... DOWN
M ... LEFT
, ... RIGHT
N ... ROTATE

Or joysticks.

LOADING TIME 2.40 minutes
GRAPHICS (for a VZ)..... *****
SOUND .... ****
ANIMATION (complication) *****
OVERALL .... *****

UTILITY REVIEW DEPT.

Program Copier from Celestron Software is a handy utility that allows you to copy your own or other peoples copy protected software for them. Written by N. Sarafoudis, this is an excellent program and is extremely well worth investing in. The program itself consists of three parts:-

Part one - title page and loader

Part two - central machine code program

Part three - basic driver

After loading you are presented with a menu containing six options. Load, Text Saver, Binary Saver, Program Information, Tape to Disk Transfer and Quit.

Saving a Text program can be done without Program Copier easily enough just by using the basic CSAVE command, but saving a Binary program is a more involving process with out Program Copier.

To save a Binary (machine language) program using Program Copier is quite easy. Firstly, you load the program using the Load routine and then simply save that program using the binary save routine. If you choose program information, you will recieve the start and end addresses of your saved program, and how much memory, in kilobytes, it takes.

The tape to disk transfer works quite well and overall this is a good program.

*** EDITORS NOTE...

As Editor of this Newsletter I feel that it is my responsibility to try not to misguide our readers in any way. So on that cue I would like to alert you of the pitfalls in dealing with an organisation like CELESTRON SOFTWARE, of HUNTINGDALE (Melb). My personal experience is that of a cheque sent to Celestron, was drawn against my account, and six months later, after numerous reminders, still nothing. I am also aware of a fellow member who sent a program/disk to Celestron, some months ago, needless to say, he recieved no word from them, nor did he get his disk back. So be warned, DON'T buy from Celestron Software, as in my opinon, they are nothing short of thieves, the only difference being that you send your wares to them, they don't have to come to you to steal them. I'm almost sure copies of Program copier can be obtained by other means than sending your money to those crooks.

In the same breath I would make it quite clear that I agree with Adam and Matthews' critique.

IS THIS A VIDEO DISK ?

For those VZ users who have acquired a disk drive. VZ DOS (disk operating system) users will have discovered how primitive and limited are the sequential data file facilities provided for the VZ. They are as useless as the DOS manual indicates. I avoid them like the plague. So what to do when you want to save data to disk? Use the binary file commands BSAVE and BLOAD!

The DOS is quite misleading as to the potential uses of these commands. You are told that "These commands are for binary language programs", which gives the impression that they are to be used exclusively to save and load machine code programs and so only of interest to users who are into machine language programming. Not so! You don't have to know anything about machine code, assembly language, and all that, to make excellent use of these binary commands.

BSAVE faithfully records to disk the contents of all the memory cells between the START address and the END address, whether the block of memory contains a machine code program, a basic program, or any kind of data. BSAVE doesn't query what it means:

Mine not to reason it,
Mine just to save it bit by bit.

BSAVE also keeps tag of where, in memory, the file comes from. BLOAD simply reverses the BSAVEing process: it faithfully transfers the file, bit by bit, back into your computers' memory, right back into the very same cells it originally came from. Knowing this, and with a bit of imagination, all kinds of uses for these commands emerge. Here is one of the more obvious:- The screen in low res text mode occupies 512 bytes of memory from 28672 (hex 7000) to 29183 (hex 71FF). So, to record on disk the entire content of the screen you would :- BSAVE"filename",7000,71FF

BLOADing this file will return all the data in the file back to screen memory from whence it came - instant recall of the screen text/pattern from disk. In a program you would, of course, have BSAVEing and BLOADing subroutines so as to avoid having to BSAVE the BSAVEing command on the screen or having a READY message appear after BLOADing, using INKEY$ to call the subroutines.

Any kind of data can be placed in some reserved memory (by POKEing, for example) and the data BSAVEd from the reserved memory to disk. One minnor irritant is that you have to know the START and END addresses in hex. So here is a brief decimal to hex conversion program:-

```
1 N$="0123456789ABCDEF"
2 INPUT"DEC#";m
3 C%=M/4096:M=M-4096*C%:GOSUB7
4 C%=M/256:M=M-256*C%:GOSUB7:C%=M/16:M=M-16*C%:GOSUB7
5 C%=M:GOSUB7
6 PRINT"= HEX ";D$:D$="":GOTO2
7 D$=D$+MID$(N$,C%+1,1):RETURN
```

What memory can you conveniently reserve for this purpose? Well, your VZ already reserves 1536 bytes of memory which it never uses so long as it remains in the text mode. I am referring to video memory. Your VZ reserves a total of 2048 bytes of memory for video display, of which only the first 512 bytes are used to display the screen in the text mode. The remianing video memory - from 29184 (hex 7200) to 30719 (hex 77FF) - can be used to store any data you like, and it will remain intact in that memory so long as you don't switch to high res mode. BREAK a program, LOAD a program, RUN (text mode only) a program, and any data you have saved in video memory from 29184 on, remains absolutely secure.

Robert Quinn.

HI RES SCREEN DUMP FOR DMP.

```
60000 ' HI-RES COPY FOR DOT MATRIX PRINTERS - BUT NOT GP100
60010 LPRINTCHR$(15);
60020 LPRINTCHR$(27);"A";CHR$(6);
60030 FOR Y%=0 TO 63
60040 FOR X%=0 TO 127
60050 P=POINT(X%,Y%)
60060 IF P=1 THEN LPRINT" ";:NEXT:GOTO60100
60070 IF P=2 THEN LPRINT"Y";:NEXT
60080 IF P=3 THEN LPRINT"B";:NEXT
60090 IF P=4 THEN LPRINT"R";:NEXT
60100 LPRINT:NEXT
60110 LPRINTCHR$(18):LPRINTCHR$(27);"2"
60120 ' THIS LINE WOULD BE USED TO RETURN FROM THIS SUBROUTINE
```

SECRETARYS REPORT.

During this month not a great deal of activity as far as Secretary goes. All I have done so far is send out a copy of the Proposed Constitution complete with explanatory letter denoting Membership Costs and meeting procedures.

In the near future, it is intended that we make contact with other VZ Groups in relation to exchanging Newsletters and ideas, throughout Australia.

Members of the Board have had a meeting, at Gavins' place, to draft the proposed Constitution. This is to be ratified tonight by all and sundry then tabled to the Board for acceptance.

Ross Woods
(Secretary).

OH BOY! NOW IT EVEN TALKS.

For those of you who want something a little different for their computers.

Make it TALK !

There have been at least two Speech Processors available for sometime :-

1. SC-01 or SC-02

2. SPO-256-AL2 - Tandy cat# 276-1784 ($27.95)

A project using the Tandy chip, will appear in the near future in this Newsletter. There is already printed circuit board available, with a position for an 'on board' 5 volt regulator to be mounted on the 'trackside' (not component side) of the p.c.b. The board can be purchased for $5.00, which only covers the production costs.

Once built, the Speech Synthesiser, will plug into the printer interface and the OUT command is used to communicate with it. There is an EDITOR program available on either tape or disk.

The EDITOR program.
Two versions available on tape or disk. Please state tape or disk, when ordering.
V1. - to run on a 6K VZ-200 only.
V2. - to run on any 24K+ combination of VZ 200 or VZ 300

The program, being an EDITOR only, does not allow for paragraphs to be written all at once, but only words, phrases, or very short sentences up to 21 ALLOPHONES in length. Once you have on the screen the words etc., the way you want them to sound, just note down (to paper) the ALLOPHONE NUMBERS. As the program is in basic, it is very easy to change, re-arrange or rewrite to suit your own software requirements. Access to the Speech Synthesiser other than through the EDITOR program, can be gained in a number of ways. Three rather easy means of access are:-

1/ read off DATA at the start of your program and OUTput when necessary. As used in the EDITOR proram.

2/ just OUTput a series of ALLOPHONE NUMBERS at the appropiate place in your programs.

3/ operate the OUT command after asking a series of questions and recieving answers through either INPUT or INKEY$ commands. Similar to the EDITOR program.

Refer to the Tandy booklett as some of the ALLOPHONE LETTERS have been changed, but the numbers have stayed the same. For example, the booklett has the sound KK3, a sound found in 'CRicket' or 'KRemlin' or 'KRyptonite'. For this reason KK3, has been substituted for KR. This was done in an attempt to make entries simpler, and to have much more meaning.

A modified list of ALLOPHONES come with the program.

When entering the ALLOPHONES, enter a pause between each word, (P2, P3 etc..). Some words will even have to broken with pauses (probably P1), to make them sound more natural and correct. Check the word list in the Tandy booklett for examples.

To obtain the "HOW TO USE" and Board Construction notes for this particular project, you may write to me direct or contact me through the Editor or Technical Advisor of this Newsletter. All notes, ALLOPHONE list (modified), construction detail, circuit diagrams, overlay pattern(s), hook-up diagrams, printed circuit board and the program are available seperately or all together ($12) from me. I'm considering constucting the printed circuit board, ready to run and including the centronics sockett except for :-

1/ the speech chip
2/ the speaker (6" x 4") and case (I suggest wood).

I haven't as yet calculated a cost for this, but if this would suit you better please indicate this to me. The completed unit (speaker seperate of course) fits neatly into a 15cm x 9cm jiffy box.

These boards would be tested, BUT, as I state on the printed circuit board construction notes, this is still an ADD-ON and I cannot be held responsible for any damage to any parts of your equipment. These boards would be made with the regulator on board.

David Boyce.

*** Sometime in the near future..... a VZ SOUND GENERATOR.

DAVID BOYCE
41 HEATHER DRIVE
CHRITIE DOWNS 5164
SOUTH AUSTRALIA

*** EDITORS NOTE...

I have purchased a SPEECH SYNTHESISER board from David and I'm happy to say that I am particularly pleased with the end result. The board is of a very high standard and comes ready to work on. The sounds are of a "metallic" or "robotic" monotone style, but this is to expected, as your computer can't tell your Synthesiser how to put inflection into its sounds. Lots of fun, great for uses as instuctions, prompts and in games. I am currently working on a SAVE to disk (or CSAVE to tape) routine. Could be great when someone tells me how to relocate the MODEM / DOS so they don'T clash. In summation, a great project, well graphed out step by step and as I said, terrific entertainment.

WORD LIST

CLOAD	FOR	NEW	RUN
CLS	GOSUB	NEXT	SET
COLOR	GOTO	OUT	SOUND
COPY	IF	POKE	STEP
CRUN	INP	PRINT	STOP
CSAVE	INPUT	READ	THEN
DATA	LET	REM	TO
DIM	LIST	RESET	USING
ELSE	LLIST	RESTORE	USR
END	LPRINT	RETURN	VERIFY

An educational game that requests size of matrix and number of words to hide. I think you'll agree that it hides them quite well. Program recieved from D.Boyce (init. orig. unknown), work through this and find 40 BASIC commands.

A	T	E	B	G	Y	C	S	O	C	R	I	R	E	S	T	O	R	E	Y
Z	C	W	J	L	T	O	K	J	R	L	E	C	K	L	U	K	Z	S	A
J	I	H	J	J	U	U	S	S	L	P	O	M	Q	C	S	A	V	E	Y
N	W	K	C	S	W	F	E	O	W	G	D	A	F	K	V	L	V	L	D
W	R	O	I	R	I	Q	X	U	T	O	J	O	D	A	P	U	M	L	I
J	H	N	P	K	U	S	R	N	C	S	R	O	N	E	H	T	U	I	W
S	G	R	I	D	V	N	B	D	Y	U	E	T	D	E	K	H	N	D	D
T	C	P	A	Y	O	X	O	I	X	B	W	O	T	B	D	P	S	L	N
O	T	E	I	P	T	U	J	F	V	R	E	G	A	K	U	L	H	U	A
P	R	E	S	B	O	N	T	I	S	M	N	N	V	T	C	S	C	R	C
D	N	W	S	B	Z	K	Q	U	Q	B	B	Z	I	O	D	U	C	R	R
Z	I	D	P	E	T	S	E	E	E	N	D	G	S	E	C	A	L	S	Y
K	Q	M	G	H	C	O	L	O	R	V	V	W	F	T	L	H	T	B	E
H	L	I	R	V	E	R	I	F	Y	H	G	I	M	P	X	V	F	A	P
D	K	D	N	E	T	S	I	L	L	U	Y	P	R	N	H	E	Q	O	R
S	H	F	J	P	T	U	W	I	W	V	Z	I	Y	R	U	N	N	T	I
J	Z	D	U	M	H	U	K	S	K	T	N	F	S	P	K	Y	E	F	N
R	O	Z	F	T	U	K	R	T	K	T	E	S	L	E	O	S	B	B	T
E	U	T	E	V	J	U	F	N	Q	I	N	J	K	S	E	C	Z	J	Q
Z	O	L	Q	M	C	F	M	P	A	T	B	W	H	R	H	W	W	G	Q